

of ore, which, when crushed, yielded bullion to the value of £17,568 1s. 4d. by amalgamation, and concentrates to the value of £926 7s. 1d. Of the tonnage milled, 66·799 per cent. (7,726 tons) represented cyanide treatment, and yielded a bullion-value of £4,667 11s. 2d., or 12s. 0·993d. per ton treated. Of this amount, 3s. 1·788d. per ton was absorbed in working-costs, leaving a profit per ton treated of 8s. 11·205d. No additions of importance have been made to this plant during the year. Energetic shaft: Commencing the work of stripping, enlarging, and retimbering the shaft from the uprise which connected with the Wealth of Nations battery level, a distance of 70 ft. was completed at the beginning of 1902, while the remaining section (362 ft.) was completed satisfactorily to the surface early in March last. Previous to sinking operations being commenced, the brace of the shaft was raised 12 ft. to facilitate the engine, boiler, and head-gear installation, connection being then effected between the rock crosscut extension of the battery level and shaft on day-wages. Sinking was afterwards continued on contract, and a total depth of 837 ft. from the surface was attained at the end of the year. The shaft will probably reach the bottom level of the Wealth of Nations Mine about the middle of June. New hoisting machinery is now on order from London.

*Golden Fleece.*—Operations have been continuous in this mine, and a considerable amount of development-work has been done, principally on Nos. 11 and 12 levels, besides sinking the hoisting-shaft between these two levels and making the necessary connections. Generally, stoping has been carried on from the Royal tunnel down to No. 11 level, in which area a large amount of ground has been exhausted to provide the tonnage crushed, the reef formation being very irregular throughout the mine, thus making it necessary to stope a considerable area of non-productive ground in order to mine the isolated patches of quartz. The gross tonnage crushed (13,614 tons) yielded bullion to the value of £23,403 13s. 11d., besides the sulphides produced, which were sold for £1,741 18s. 10d. At the cyanide-works 9,550 tons of coarse sands, representing 70 per cent. of the total crushed, together with 880 tons of tailings from the old Venus Mine, were cyanided, yielding bullion to the value of £4,744 12s. 7d. Of this amount, 2s. 3·716d. was absorbed in working-costs, leaving a profit of 6s. 9·460d. per ton. No alterations of importance have been made in the equipment during the year, and the machinery has worked satisfactorily.

*Progress Mines.*—Extensive developments have been made during the year, comprising 3,283 ft. of driving and crosscutting and 795 ft. of rising and sinking, with the result that the ore-reserves of mill rock are practically the same as at the corresponding period of last year, although 56,000 tons has been mined and milled. Large bodies of low-grade rock have also been developed, which under present conditions will not pay for extraction. The principal developments have been carried on at Nos. 2, 5, 6, 8, 9, and 10 levels, whilst stoping has been extended in a general manner throughout the mine from No. 2 level downwards. With regard to deeper sinking, the shaft remains as at last report, No. 10 being the lowest level open. Probably the most interesting part of the mine-workings was confined to No. 6 level east, where a very fine ore-body was recently cut through, measuring 34 ft. from foot-wall to hanging-wall, and dipping at an angle of 30 degrees. This was being vigorously opened up by means of rock-drills driving both ways, besides uprising on stone to connect with a winze previously sunk from No. 5 level. Development on No. 9 level east has also been interesting in proving a large tonnage of high-grade stone similar in structural position to a comparatively flat coal-seam. Alterations of importance have not been made in the surface equipment, except that a new concrete foundation is built awaiting the transference of the old shaft hoisting-engine on to it. The output of quartz mined and transported by the aerial tram for reduction at the battery was 55,976 tons, yielding 21,123 oz. 8 dwt. 13 gr. of bullion by amalgamation, valued at £87,887 15s. 8d.; while 990 tons of concentrates, produced and treated by chlorination, yielded 3,269 oz. 6 dwt. 13 gr. of bullion, to the value of £13,367 0s. 2d. Treatment at the cyanide plant comprised 16,422 tons of sands exclusively taken from the battery, with the exception that some of the accumulated tailings were treated during the first five months. The gross yield from cyaniding is valued at £5,745 0s. 4d. The extraction was equal to 6s. 11·961d. per ton, of which only 2s. 8·844d. per ton was absorbed in treatment charges, leaving a profit of 4s. 3·117d. per ton. Another treatment-tank is shortly to be added to the ten that now compose the cyanide plant. The total working-cost (excluding capital and development expenditure and cyanide-works account) amounts to: Working-cost, £46,838 18s. 2d., at 16s. 8·824d. per ton; profit, £54,415 17s. 8d., at 19s. 5·311d. per ton. Cyanide-works: Working-cost, £2,247 7s. 4d., at 2s. 8·844d. per ton; profit, £3,497 13s., at 4s. 3·117d. per ton; making total cost (excluding capital expenditure) £49,086 5s. 6d., the total value yield £106,999 16s. 2d., and the total profit £57,913 10s. 8d., which may be considered as a very satisfactory balance-sheet. The efficiency of the plant has been well maintained, the only items added being an 18 ft. diameter tailings-elevator wheel, and classifying arrangements to separate the sands from the slimes. In the battery-house a strong-room has been built into the solid for the reception of amalgam, &c., while the canvas plant has been further extended by twelve new tables 10 ft. by 15 ft. long, all housed in, and a large increase is noticeable in the amount of slimes made. Seeing the mill ran the full theoretical time, *minus* 10·98 days, the milling-time may be considered exceptionally good. The total loss of time as stated includes the monthly clean-ups, daily scrapes, and incidental stoppages. A successful and prosperous year is confidently looked forward to for 1903.

*Keep-it-Dark.*—The mining and development operations so far carried out on this property have been continuous and successful. The output gave an ore-production of 11,405 tons for milling and cyanide extraction, the stone being stoped chiefly from Nos. 2 and 3 levels. These stopes are practically exhausted, with the exception of a parcel of low-grade ore located near the western extremity of No. 3. In extending deeper-level development in the main shaft, sinking has been successfully completed from Nos. 3 to 5 levels to a further depth of 300 ft., and suitable chambers